Heritage Glass Material Safety Data Sheet

SECTION I: IDENTIFICATION

Trade Name: HG Aggregate, glass chips or glass frit.
Color: CA Red, T Orange, Yellow
Manufacturer's Name: Heritage Glass
130 West 700 South Bldg. H
Smithfield, UT 84335
Updated: September 2009
435-563-5585

SECTION II: HAZARDOUS INGREDIENTS

Hazardous Components:
The glass may contain the following hazardous components in amounts less than and up to the maximum of the following percentages. The following are chemical compounds used in the manufacture of red and orange glass; changes in the chemical compounds occur during glass formation.

Component	CAS#	Max% on glass	ACGIH-TLV/OSHA PEL
Zinc (Zn)	7440-66-6	1.45	5 MG/m3 – (Fume)
Sodium Silicofluoride	16893-85-9	1.25	2.5 mg(F)/m3
Cadmium Oxide (CdO)	1306-19-0	0.66	.1 mg/m3-fume
Selenium (Se)	7782-49-2	0.19	.2mg/m3-dust

Additional information:
Because this glass may be ground, polished, fused, reheated, and reformed, toxic substances in this glass may become bio-available. Because Heritage Glass has no control over uses and process, we are listing all toxic substances as if they are all 100% bio-available.

SECTION III: PHYSICAL DATA

Boiling point: greater than 3000° F
Specific gravity: 2.56-2.58
Melting point: 1300° F softens; 1800—2000°F melts
Vapor pressure (mm Hg): N/A
Evaporation rate (butyl acetate =1): N/A
Solubility in water: negligible
Appearance and Odor: glass aggregate in various colors and sizes from -40 mesh to 3 inch. No odor.

SECTION IV: FIRE AND EXPLOSION DATA

Flash point (method used): N/A
Flammable limits: non-flammable
LEL: N/A
UEL: N/A
Extinguishing media: N/A
Special fire and explosion hazards: may emit toxic fume at sustained temperatures above 1300° F

SECTION V: REACTIVITY DATA

Stability: stable Conditions to avoid: N/A

Incompatibility (materials to avoid): hydrofluoric acid

Silica in the glass will dissolve in hydrofluoric acid and produce a corrosive gas-silicon tetrafluoride. Hydrofluoric acid may also produce highly toxic hydrogen selenide gas from selenium and some selenium compounds.

Hazardous decomposition or byproducts: at temperatures above 1300° F hazardous Cadmium and Zinc Selenide fume may be given off

Hazardous polymerization: will not occur

SECTION VI: HEALTH HAZARD DATA

Routes of Entry

Inhalation: Yes

Skin: Yes

Ingestion: Yes

Health Hazard Acute and Chronic

ACUTE

Skin contact: sharp edges and slivers of glass may cut or puncture skin.

Ingestion: ground glass or glass particles may cause internal bleeding requiring medical attention

Inhalation:

Dust—glass dust may cause respiratory irritation. Silica in glass dust is not in a free silica state

Fume—when glass is reheated or melted hazardous fume may be given off. Can cause nausea, gastric pain, and irritation to the upper respiratory tract. A single exposure to CdO fume can cause acute poisoning with severe lung irritation and pulmonary edema which can be fatal.

CHRONIC

Inhalation and ingestion: repeated inhalation of irritating glass dust may cause chronic respiratory diseases. Repeated inhalation or ingestion of glass dust or fume containing small amounts of one or more of the following toxic components: selenium, cadmium, fluoride, or zinc may cause or contribute to chronic diseases.

Selenium—Selenium compounds or selenium are an IARC Class 2 carcinogen

Cadmium—Cadmium poisoning is characterized by lung injury (emphysema) and kidney dysfunction (proteinuria). Compounds of cadmium dust and fume are considered cancer agents.

Fluoride—Associated with tooth and bone defects. May contribute to birth defects or other reproductive harm.

Zinc—Lung damage from inhalation of fume

Carcinogenicity:

Compound	NTP	IARC	OSHA
Cadmium and its compounds (dusts)	Yes	Yes	No
Selenium compounds	No	Yes	No
Selenium sulfide	Yes	Yes	No

Symptoms and sign of overexposure
Dust—inhalation of large amounts of dust or powdered glass will cause shortness of breath and reduce pulmonary function. No toxic ingredients should be present in amounts sufficient to produce acute symptoms.
Fume—inhalation of fume from the reheating or melting of the glass can cause Metal Fume Fever, symptoms include metallic taste in mouth, shortness of breath, gastric pain and flu-like symptoms.
Medical conditions aggravated by overexposure: respiratory and cardiovascular disease. Exposure to toxic metal fume may contribute to kidney dysfunction.

Emergency first aid procedures:

Eyes: flush with running water; receive medical attention as necessary
Ingestion: receive medical attention
Inhalation:
Dust—remove to fresh air; receive medical attention as necessary
Fume—drink milk to counteract Metal Fume Fever; receive medical attention
Cut: stop bleeding, clean wound and apply a bandage. See doctor if necessary

As in all medical emergencies report to your supervisor and receive follow-up medical attention for treatment, observation and support as needed.

SECTION VII: SAFE HANDLING AND USE

Steps to be taken if material is released or spilled: sweep, use measures to avoid creating dust
Waste disposal methods: follow federal, state and local regulations for disposal of glass and mirror
Precautions in handling and storage: take precautions against bad breakage or spillage, avoid creating dust
Other precautions: Use adequate ventilation and dust collection as needed. When cutting or grinding glass in a recycled-water-cooled system small amounts of sodium may dissolve and become concentrated in the water as sodium hydroxide. When using a water-cooled or grinding system wear rubber gloves to protect hands and wear safety splash goggles.

SECTION VIII: CONTROL MEASURES

Respiratory protection: use conventional particulate respiratory protection based on considerations of airborne concentrations and durations of exposure
Ventilation: local exhaust—to meet PEL requirements; mechanical (general)—to meet PEL requirements
Protective gloves: recommended
Eye protection: safety glasses, face shield
Other protective clothing: as appropriate in light of specific application
Work hygienic practices: avoid creating dust. Change clothes and shoes, shower at end of work day

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